

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A nanocomposite comprising:
about 70 wt % to about 99.99 wt % of at least one polyolefin; and
about 0.01 wt % to about 30 wt % of at least one modified carbon nanotube,
wherein the modified carbon nanotube has been functionalized with at least one modifier
~~selected from the group consisting of alkenes and amines~~ comprising an alkene.
2. (Original) A nanocomposite as in claim 1 wherein the carbon nanotube comprises
a single-wall nanotube.
3. (Original) A nanocomposite as in claim 1 wherein the carbon nanotube comprises
a multi-wall nanotube.
4. (Original) A nanocomposite as in claim 1 wherein the carbon nanotube comprises
a carbon nanofiber.
5. (Original) A nanocomposite as in claim 1 wherein the at least one modifier is an
alkene selected from the group consisting of isoprene, butadiene, isobutadiene, and mixtures
thereof.
6. (Cancelled)
7. (Currently Amended) A nanocomposite as in claim 1 wherein the modifier is
~~selected from the group consisting of~~ comprises isoprene and octadecylamine.

8. (Original) A nanocomposite as in claim 1 wherein the polyolefin is selected from the group consisting of polyethylenes, polypropylenes, ethylene-propylene copolymers, ultra-high molecular weight polyethylenes, high pressure low density polyethylenes, linear low density polyethylenes, linear medium density polyethylenes, high density polyethylenes, and modified polyethylenes.

9. (Original) A nanocomposite as in claim 1 wherein the polyolefin comprises an ultra-high molecular weight polyethylene.

10. (Original) A fiber comprising the nanocomposite of claim 1.

11. (Original) A film comprising the nanocomposite of claim 1.

12–31. Cancelled.

32. (New) A nanocomposite comprising:

about 70 wt % to about 99.99 wt % of at least one polyolefin; and

about 0.01 wt % to about 30 wt % of at least one modified carbon nanotube,

wherein the modified carbon nanotube has been functionalized with at least one modifier comprising an alkene selected from the group consisting of isoprene, butadiene, isobutadiene, and mixtures thereof.

33. (New) A nanocomposite as in claim 32 wherein the carbon nanotube comprises a single-wall nanotube.

34. (New) A nanocomposite as in claim 32 wherein the carbon nanotube comprises a multi-wall nanotube.

35. (New) A nanocomposite as in claim 32 wherein the carbon nanotube comprises a carbon nanofiber.

36. (New) A nanocomposite as in claim 32 wherein the modifier comprises isoprene.
37. (New) A nanocomposite as in claim 32 wherein the polyolefin is selected from the group consisting of polyethylenes, polypropylenes, ethylene-propylene copolymers, ultra-high molecular weight polyethylenes, high pressure low density polyethylenes, linear low density polyethylenes, linear medium density polyethylenes, high density polyethylenes, and modified polyethylenes.
38. (New) A nanocomposite as in claim 32 wherein the polyolefin comprises an ultra-high molecular weight polyethylene.
39. (New) A fiber comprising the nanocomposite of claim 32.
40. (New) A film comprising the nanocomposite of claim 32.